NASA Facts

National Aeronautics and
Space Administration

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NASA Aviation Safety Program: Making the Skies Safer

The goal of the NASA Aviation Safety Program is to reduce the fatal aircraft accident rate by 80 percent in 10 years, and by 90 percent in two decades. The ambitious $500-million program is a partnership that includes NASA, the Federal Aviation Administration (FAA), the aviation industry and the Department of Defense.

NASA Langley Research Center in Hampton, Va., is leading the safety program. Critical roles also are being played by three other NASA field installations: Ames Research Center in Moffett Field, Calif.; Dryden Flight Research Center in Edwards, Calif.; and Lewis Research Center in Cleveland, Ohio.

The Aviation Safety Program was created by NASA Administrator Daniel S. Goldin in response to a report from the White House Commission on Aviation Safety and Security, chaired by Vice President Al Gore. The program also is part of a new "Three Pillars for Success" initiative that spells out what NASA will do to achieve national priorities in aeronautics and space transportation technology.

Major strides have been made in the last 40 years to make flying the safest of all major modes of transportation. More technological advances are needed, however, to prevent a rise in accidents if air traffic triples as predicted in the next 20 years.

The safety program will emphasize not only accident reduction, but also a decrease in injuries when accidents do occur. The program will include research to reduce human-error-caused accidents and incidents, predict and prevent mechanical and software malfunctions, and eliminate accidents involving hazardous weather and controlled flight into terrain.

The program also will use information technology to build a safer aviation system to support pilots and air traffic controllers. The FAA will help define requirements and actions to enact many of the safety standards. The DoD is expected to share in technology development as well as apply safety advances to military aircraft.

NASA has planned for about $500 million over five years for this and related safety programs, with more funding expected to follow. Funding is coming from reprogramming existing aeronautics funds, and by reassigning people and the work of NASA facilities.

NASA, in partnerships with the FAA and private industry, has made significant accomplishments in aviation safety. Some examples include:

- Providing technology for advanced warning of wind shear;
- Designing advanced air-traffic-management equipment and procedures;
- Developing ways to ensure older aircraft are as structurally sound as new ones;
- Improving engine reliability, systems and displays;
- Developing advanced ice-protection concepts to improve aircraft operations;
- Improving the control of general aviation aircraft stall and spin.